Comments on Vol.1, October 29, 2013

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A. Comments on statements in Vol. 1 Strategic Plan; Chapter 3. California Water Today

**Delta Vulnerabilities**

*Delta Risk Management Strategy Phase I (DRMS 2009) identified concerns with the Delta levee system including the following:*

*• A major earthquake magnitude of 6.7 or greater in the vicinity of the Delta region has a 62 percent probability of occurring sometime between 2003 and 2032. This event could cause multiple levee failures, fatalities, and extensive property destruction. If the earthquake occurred in a dry year, the loss of exports would contribute to adverse economic impacts of $15 billion or more.*

*• Winter storms and related high-water conditions are the most common cause of levee failures in the region. The State typically spends at least $6 million per year in moderately successful attempts to prevent levee failures resulting from winter storms. High-water conditions could cause about 140 levee failures in the Delta during the next 100 years.*

*• Dry-weather levee failures (also called "sunny-day" events) unrelated to earthquakes, such as from slumping or seepage, will continue to occur in the Delta about once every seven years.*

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Though DRAMS 2009 was read by DWR staff, the heart of that report; the [Delta Risk Management Strategy (DRMS) that included five infrastructure options was neither described nor were the features and findings of each option set forth in full. This report, a DWR document, prepared jointly by DWR and exterior consultant should have been included. This information is essential for so a reader can make a reasoned judgment of the final Plan 2013 Update – the broader findings, proposals and the rationale.

The DRAMS option found to have the least risk, ease of rehabilitation from catastrophe, and lowest cost was essentially the Peripheral Canal that was selected in 1964 by DWR, CFW and USBR. The Project implementation schedule would deliver water to the export pumps in 1976. Subsequently DWR launched design and acquisition of the right-of-way. To reduce costs and minimize environmental impacts of the adjacent IS-5 and the PC, CALTRANS excavated material from the canal was provided for elevating the IS-5 roadway.

Importantly, DFW found that the complete and flexible management of its flow release into the Delta's entire eastern natural channels provided by the Peripheral Canal was a basic capability not possible with any other options identified in the investigations and is not possible by schemes now being pursued. This capability was also strongly supported by the SWP / CVP. DWR placed an engineer responsible for launching the project joined by DFW member Bob Jones, Deputy Director of that agency.

It should be noted that Bob Jones, subsequently drafted the California's first Environmental Law that also became a primary reference for other state and federal agencies to follow.

It should also be noted that independent of the SWP – CYP Delta conveyance issues there is a State / Federal program already in place to provide ongoing assistance to address Delta flood issues. State and Federal legislation reflects the governments' responsibilities for monetary assistance and technical support of the maintenance work by the responsible Delta districts. These include: the Delta Protection Act of 1959 establishing the Delta Protection Commission to develop long-term resources management plan for the Delta Primary Zone. The 1986 Delta Flood Protection Act significantly increased monetary assistance to the 49 districts charged with the maintenance of local Delta levees under the Delta Levees Maintenance Subvention Program established in 1972.

The Federal and local emergency expenditures during the period from 1980 to 1986 awarded to 49 Reclamation Districts are indicative of the support;

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|---|---|
| FEMA. | $ 65,036,084 |
| NDAA | $ 26,543,111 |
| Local Districts | $ 5,789,261 |
| Grand Total | $ 97,368,456 |

The States Maintenance Subvention program expenditures during the period from 1981 to 1991; total and the cost per mile, are indicative of that support:

| | |
|---|---|
| State | $ 26,347,323 |
| Local | $ 36,94 6,212 |
| Grand total | $ 63,293,535 |
| Cost per mile; | $ 1,236,448 |

**Delta and Suisun Marsh Planning**

• _*Created the Delta Stewardship Council as an independent State agency whose mission is to help* 32 *achieve the two coequal goals of providing a more reliable water supply for California and* 33 *protecting, restoring, and enhancing the Delta's ecosystem.* 34
• _*Ensured the Department of Fish and Wildlife and the State Water Resources Control Board* 35 *identify the water supply needs of the Delta estuary for use in determining the appropriate* 36 *water diversion amounts associated with the BDCP.* 37
• _*Established the Sacramento-San Joaquin Delta Conservancy to implement ecosystem* 38 *restoration activities within the Delta. Restructured the Delta Protection Commission.*

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Will the new independent State agency have powers for -- *providing a more reliable water supply for California* -- that over-ride or duplicate DWR efforts? This should be important issue should made clearly evident throughout the Update and related legislation.

To help California meet Delta environmental goals and ensure the contribution California's agriculture and maintain the cities and communities in the interior, DWR must place higher priority on existing available resources. DWR should require (not just suggest) that the coastal urbanized zones to recycle their effluent as proven possible by San Diego. Most of the larger zones now uses the treated effluent from California's interior cities like Sacramento and in the case of MWD, Las Vegas.

Desalination is a second source on additional reliable resources for California's Coastal urban area. This is a viable reliable action proven at numerous locations in the world. San Diego recently committed itself to purchasing a supply from a relatively small installation.

The traditional sources of additional supply, and carry-over storage for use in periods of shortage still exist. California would be well served to commence construction of new dams; on-stream and off-stream. The urban coastal utilities can afford the more costly services.

A final question; will DFW adhere to the Federal and State laws regarding the 'endangered species' since it now promotes the striper fisheries in the Delta? This violation has been allowed ever since the Federal and State laws were enacted.

**Delta Risk Management Strategy (DRMS)** 14
*The DRMS evaluates the risks from Delta levee failures and ways to reduce those risks. Preliminary 15 evaluations show that there are substantial levee failure risks from earthquakes and floods and these are 16 expected to increase in the future. In Phase 1, DRMS evaluated the risk and consequences to the Delta 17 and the state associated with the failure of Delta levees and other assets, considering their exposure to a 18 number of hazards today and in the future. In Phase 2, DRMS evaluated strategies and actions that can 19 reduce these risks and potential consequences. Additional information is available at 20 http://www.water.ca.gov/floodsafe/fessro/levees/drms/.*

The next tsunami or exceptional storms will overwhelm the interior Delta levees destroying many as well as the protected islands. The USCE requires an accommodation of a two-foot sea rise in all new and rehabilitation USCE work in the SF BAY. And that is to be upgraded in the coming year. The reliability of SWP / CVP supply and ease of infrastructure repair under all circumstances, including climate change, should have highest priority. DWR must issue the full findings of DRAM as already mentioned above.

## Adapting to Climate Change

*Long-standing issues related to water management, ecosystems, water quality, and public 39 safety in the Sacramento-San Joaquin Delta beg for resolution as well. With the current water 40 management system, more freshwater releases from upstream reservoirs will be required to repel the sea to maintain salinity levels for municipal, industrial, and agricultural uses. Changes in upstream and in-1 Delta diversions, exports from the Delta, and conveyance through or around the Delta may be needed. A 2 specific example of a broader-scale policy effort is the Bay Delta*

*Conservation Plan, which provides an 3 approach that substantially improves resiliency to climate change and provides additional system 4 flexibility.*

*Changes in upstream and in-1 Delta diversions, exports from the Delta, and conveyance through or around the Delta may be needed.*

There is no mention of the DRAM findings used in the preparation of BDCP. Why? Or did the formulation of BDCP ignore the options set forth in DRAM that would provide greater benefits including supply security to all of California. The DRAM analyses yields information on how best to provide a reliable supply to the SWP and CVP customers.

End of Vol. 1 Comments I hope that will prove helpful

Regards

Harald